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**REMARKS**

This amendment is being filed in response to the Office Action mailed April 13, 2005 for which a three-month extension of time is requested. Claims 37-39 are being cancelled and claims 44-51 have previously been cancelled. Accordingly, claims 1-36 and 40-43 remain pending in the application.

Claim 42 stands objected to because of the missing word "can" in the claim. The undersigned thanks the Examiner for noting this error. This dependent claim has been substantially rewritten in view of other claim changes and, in doing so, this error has been eliminated.

The drawings and specification stand objected to on the basis of the wording in claim 18 that the "discharge circuit [is] at least partially contained within said housing." Applicant respectfully traverses the objection because the specification and drawings each individually disclose an embodiment of the invention within the meaning of this language from the claim. The quoted portion of claim 18 means that the discharge circuit is either wholly or partially contained within the housing. The specification at paragraph [0022] states that "All of the components of discharge circuit 14, except the igniter 52, are contained within housing 70," and then goes on to state that, if desired, the igniter can be considered to be a load rather than a portion of the discharge circuit, in which case the entire discharge circuit would therefore be located within the housing. This is shown in Fig. 3 wherein the components 74 of the discharge circuit (not including the igniter) are shown on the inside surface of the lid of the illustrated embodiment of the housing, with Fig. 4 then showing the housing completely closed (with the components contained within the housing). This is specifically described at the end of paragraph [0022] where the specification states that "Housing 70 also includes a metal lid 76 that fits over the open end of the metal can 78 to thereby enclose the components 74 inside the can between its bottom wall and the lid 76." Paragraphs [0023] and [0024] then discuss additional detail and options for enclosing at least part of the discharge circuit within the

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housing, and paragraph [0025] then continues on to describe an assembly process for achieving the construction described in the preceding paragraphs and shown in the figures.

Looking at the situation even more closely, original claim 18 specifies that the discharge circuit includes (1) an input for receiving said charging signal, (2) an energy storage device contained within said housing for storing electrical energy received from said charging signal, (3) a switching device connected to said connector, and (4) an igniter directly attached to said connector. Thus, the discharge circuit in the invention of claim 18 includes an igniter. The illustrated embodiment shows this igniter schematically in Fig. 1 as a part of the discharge circuit. Since the igniter can be a conventional component, no further detail is supposed to be provided (37 C.F.R. § 1.83(a)). Fig. 1 also shows the other three claimed components of the discharge circuit, each of which can be conventional components. Figs. 3 and 4 show that all of the components 74 of the discharge circuit except the igniter are located within the housing once the lid is assembly onto the housing. Thus, the drawings show all of the components of the claimed discharge circuit and show that the discharge circuit is partially contained within the housing (partially, not wholly, since the igniter is not shown in the housing).

Thus, Applicant respectfully submits that all claimed features of claim 18 are shown in the drawings, and further that the specification clearly and specifically describes an embodiment of the claim 18 feature noted by the Examiner. Nonetheless, if the Examiner still has some concern about this aspect of the application, it is requested that the undersigned be contact by telephone to further address this issue.

#### **Claim Rejections**

Claims 1, 2, 4, 5, 8-10, 13, 27, 31, and 36 stand rejected under 35 U.S.C. § 102(b) as being anticipated by McNulty '720. Claims 3 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of Mathisen. Claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view

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of the cited excerpt from the Standard Handbook for Electrical Engineers. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of McNulty '123. Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of McMills. Claims 14, 32, and 37-41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of Straub. Claims 15-17, 33, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of Straub and Minks. Claims 18, 22-26, 34, 42, and 43 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of Straub and Minks. Claims 19 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of Straub, Minks, and the Standard Handbook for Electrical Engineers. Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of Straub, Minks, and Mathisen. Claims 28 and 29 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McNulty '720 in view of Straub, Minks, and the Standard Handbook for Electrical Engineers. These rejections are traversed for the reasons discussed below.

McNulty '720 is directed to a spark ignition system in which portions of the ignition system are separated into an exciter unit 20 and compositor units 21, 21a, each of which is contained in a different housing as shown in Fig. 8, with a cable 24 being used to transfer power between the exciter 20 and compositors 21, 21a. As shown in Fig. 1, a storage capacitor (condenser) 60 is provided in the exciter 20 and is charged via a transformer 42. Spark discharge at the igniter plug 22 is initiated by a triggering pulse sent via a breaker point 34 and the cable 24 to a transformer 73 which sets up high voltage oscillations that via coil 77 cause a spark across gap 22. This enables the storage capacitor to discharge via cable 24 to the compositor 21 which results in a more intense spark at the gap 22. This operation is described at column 6, line 15 to column 7, line 30 of McNulty '720. Thus, the McNulty circuit does not involve the partitioning of the exciter into a low-energy charging circuit and a high-energy discharging circuit as called for in claim 1.

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More specifically, claim 1 as amended recites a low-energy charging circuit, a high-energy discharge circuit, and a low-energy electrical cable connecting the charging and discharge circuits, wherein the discharging circuit includes an energy storage device for storing electrical energy received from the charging signal in an amount sufficient to create a spark across said igniter. This is not disclosed or suggested by McNulty '720. Rather, as discussed above, in McNulty '720 the storage capacitor that provides most of the spark energy is located in the exciter unit 20 such that its stored energy is dumped all at once to the spark gap via the cable 24 interconnecting the two units 20, 21. The invention recited in claim 1, on the other hand, allows for low current charging of a storage capacitor located remotely at the igniter.

Furthermore, the triggering circuit used by McNulty '720 to initiate the spark also does not utilize an energy storage device in his compositor 21 that receives a high voltage, low current charging signal; rather, he sends the compositor a low (battery) voltage pulse that is stepped up at the compositor 21.

With respect to independent claim 18, as amended it recites that the discharge circuit is located in a housing remotely from the charging circuit, and that the discharge circuit includes:

- an input for receiving said charging signal,
- an energy storage device contained within said housing, said energy storage device being connected to said input and said connector to thereby store electrical energy received from said charging signal and to thereby provide the stored energy to said connector,
- a switching device connected in circuit to initiate discharge of the stored energy from said energy storage device to said connector, and
- an igniter connected to said connector.

Claim 18 also specifies that the energy storage device stores sufficient energy from the charging signal to create a spark at the igniter. Thus, the subject matter of this claim is also not disclosed by McNulty '720 since the claim specifies that the remotely located and

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separately housed discharge circuit has an energy storage device that stores energy from a charging signal received from the charging circuit, and that this stored energy is then used to create a spark at the igniter.

Independent claim 27, although of different scope, is similar to claim 18 in this respect and thus is not disclosed by McNulty '720.

Accordingly, McNulty '720 does not anticipate independent claims 1 or 27 (or 18). The other prior art cited in the various § 103(a) rejections have also been reviewed and Applicant respectfully submits that none of these references, whether considered singly or in combination, make up for this deficiency of McNulty. Accordingly, independent claims 1, 18, and 27, as well as claims 2-17, 19-26, and 28-36 that each ultimately depend from one of these independent claims, all patentably define over the prior art.

With respect to independent claim 37, this and claims 38 and 39 have been cancelled and the cancellation of these claims is without disclaimer of the subject matter thereof and without prejudice to Applicant's right to later submit one or more claims covering the subject matter thereof. Claim 43 has been rewritten into independent form and claims 40-42 have been rewritten so that each now depends from claim 43.

Claim 43 recites a discharge circuit located within a cylindrical can having a lid, and further recites that the can has a first opening located on a circumferential surface of the can and a second opening located on the lid. The claim also specifies that there is a connector disposed in the second opening. McNulty '720 does not teach or suggest a connector disposed in an opening in the lid. As discussed in Applicant's specification, the advantage of this construction is that it permits the components to be assembled onto the lid and then sealed within the can during assembly of the lid onto the can. This is nowhere disclosed or suggested by McNulty '720 or the other prior art of record. Accordingly, claim 43 and its dependent claims patentably define over the prior art.

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In view of the foregoing, Applicant respectfully submits that all claims patentably define over the prior art. Accordingly, reconsideration is requested. The Examiner is invited to telephone the undersigned if doing so would advance prosecution of this case.

The Commissioner is hereby authorized to charge the three month extension of time and any other fees or deficiencies, or credit any overpayment associated with this communication to Deposit Account No. 50-0852.

Respectfully submitted,

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